

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN**

GWYNETH GILBERT, MONICA DECRESCENTIS and STEPHANIE ANDREWS, et al., on behalf of themselves and all others similarly situated,	
Plaintiffs, v.	Consolidated Civil Action No. 3:19-cv- 823-JDP
LANDS' END, INC. and LANDS' END OUTFITTERS, INC.,	
Defendants.	

RULE 26 REPORT OF PAMELA L. SCHEINMAN, M.D.

NOW the undersigned, Pamela L. Scheinman, MD and in compliance with the Court's Scheduling Order and Federal Rule of Civil Procedure Rule 26 Disclosure requirements, herewith provides the following report, showing the Court as follows:

1.

My name is Pamela L. Scheinman. I am currently a licensed physician, and Director of the Contact Dermatitis and Occupational Dermatology Program at Brigham and Women's Hospital, a position that I have held since 2014. I am also an Associate Professor of Dermatology at the Harvard Medical School, a position which I have held since 2015. I previously held teaching and clinical positions at University of Rochester School of Medicine and Dentistry, George Washington University Medical School, and Tufts University School of Medicine where I was both an attending physician at the Tufts Medical Center ultimately becoming Director and Founder of the Contact Dermatitis and Occupational Dermatology Unit at Tufts Medical Center. I have held leadership roles in various committees and societies devoted to the field of Dermatology and have published numerous peer-reviewed articles. I am responsible for several clinical innovations in the field of dermatology as detailed in my current Curriculum Vitae, which is attached hereto and marked as Exhibit "A".

2.

I have not testified as an expert at trial or by deposition within the previous four years.

3.

A list of all publications authored by me in the last 10 years is attached hereto and marked as Exhibit "B".

4.

A listing of all the materials I have reviewed in this case is attached hereto and marked as Exhibit "C".

5.

A copy of my fee schedule is attached hereto as Exhibit "D".

6.

I have been retained by counsel for the Plaintiffs in this case to evaluate the causal connection between certain chemical compounds and heavy metals found in the Delta employee uniforms manufactured by Lands' End, Inc. and/or Lands' End Outfitters, Inc., ("Lands' End") which Delta employees began wearing on May 29, 2018 and the various physical complaints and injuries reported by more than 2,000 of these employees, primarily but not exclusively, flight attendants, since switching to these uniforms. These employees reported a wide range of symptoms which can be categorized into several areas, including **dermatological**, including rashes, hives, itching, skin injury, skin irritation, blisters, hair loss; **pulmonary**, including reactive airway disease, asthma, lung congestion, shortness of breath, breathing difficulties/dyspnea, excess coughing; **ear, nose and throat** - nose congestion, sore throat, trouble swallowing, ringing in ears, vocal cord dysfunction, sinus irritations, swollen glands, gum bleeding; **ocular**- burning red eyes, watery eyes; **general** - fatigue, sleep disruption; **psychiatric** - anxiety, emotional distress; **neurological** – fuzzy memory, blurred vision, muscle weakness, joint swelling and pain, tingling in limbs, tremors, headaches, dizziness; and to a lesser degree, **gastro-intestinal/renal** - stomach issues including pain, nausea, diarrhea, kidney pain, bloody urine, and **cardiovascular** –

increased heart rate, high blood pressure. In addition, many of these employees complain of **sensitization**, which continues even after they are no longer wearing the uniforms.

7.

Based upon my knowledge and training in the fields of dermatology, contact dermatitis and occupational skin disease, as well as my research, writing and teachings in those areas of medicine for over 25 years, and based upon my educational background, and review of applicable authoritative publications, and other experiences, as well as the medical records, fabric testing and test reports provided to me by counsel, the following summarizes my professional opinions on the causal relationship between the symptoms complained of by the Delta employees, and the Lands' End uniforms.

8.

It is my understanding that the Delta uniforms which were all manufactured overseas at several different facilities by Lands' End were intentionally treated with various chemical finishes during the dying process to make the uniforms fire retardant, stain and odor resistant and permanently pressed. Many, but not all, of the uniforms causing symptoms were purple in color. It is my understanding that many wearers of the uniforms, especially the flight attendants, complained that their uniforms were not colorfast, and caused what is known as "crocking" onto their skin, other garments and household furnishings.

9.

In my professional opinion, based within a reasonable degree of medical probability the dermatological symptoms, respiratory symptoms, and sensitization, as well as ocular symptoms and alopecia, were proximately caused by Lands' End Uniforms. Indeed, the

level of occupational skin disease far exceeds what one would expect in the workplace, see below.

10.

My professional opinion is based upon the following specific information:

Review of office notes of the treating physicians, including allergists and dermatologists who have treated various Delta personnel.

Some plaintiffs who were evaluated via patch testing showed multiple strong and extreme positive reactions to textile blue and orange dyes and structurally similar chemicals such as p-phenylenediamine, black rubber mix, and benzocaine (these are all structurally similar to the textile dyes, disperse blue 106 and disperse blue 124). Additionally, they showed strong or extreme reactions to formaldehyde, formaldehyde releasing preservatives and textile formaldehyde resins. Formaldehyde can be used to impart a permanent press, wrinkle resistant quality to fabrics. In a report by TexTech labs, formaldehyde was released in high quantities, above the recommended limits of formaldehyde release in textiles when the lab exposed Delta uniforms to heat and evaluated them for prolonged periods of time as would simulate the actual wearing conditions of the uniforms. For example, a purple Delta New blouse (TexTest, 8/28/19) showed formaldehyde release of 382 ppm after 3 hours and 157 ppm after 20 hours (both well above the recommended 75 ppm formaldehyde release level in textiles). From a 6/26/19 TexTest report, a ladies blouse alternate material from Delta showed formaldehyde release at 101 ppm.

Many of the plaintiffs had strong or extreme reactions as seen objectively via patch testing to their actual Delta uniforms; the following were strongly or extremely positive

among the different plaintiffs: light purple shirt, dark purple sweater shirts, IFS signature address, pink long sleeve shirt (100% percent cotton), Delta vest (purple inner lining), Delta vest (purple outer material), Delta apron, pink short-sleeved shirt, Delta purple pants (waistband), Delta purple pants (outer material), Delta purple pants (inner lining), purple short-sleeved turtle neck sweater, purple zip up cardigan, purple warming sweater (gold buttons), purple linear dress (outer material), purple linear dress (inner purple lining), purple Delta skirt (outer material), purple Delta skirt (inner lining), purple V-neck dress (inner lining), purple V-neck dress (outer material), purple print outer Delta scarf, purple suit jacket (material), purple suit jacket (inner purple line), red button up shirt (new), red and black cargo shirt (inner mesh), red and black zip up collar shirt, red and black cargo shirt button up.

Thus, in my professional opinion, the dermatological symptoms or injuries, which include rashes, itching, hives, tingling, scarring, facial irritation, oozing and blisters, complained of by the Delta flight attendants were proximately caused by direct contact with uniforms.

11.

Additionally, patients can be diagnosed as having occupational contact dermatitis if they fulfill 4 out of 7 criteria as delineated by Dr. Mathias (Ref 1);

The following delineates the 7 questions/criteria as posed by Mathias' article:

1. Is the clinical appearance consistent with contact dermatitis? Yes; from reviewed medical records, plaintiffs had skin eruptions consistent with dermatitis.
2. Are there workplace exposures to potential irritants or allergens? Yes; Plaintiffs were exposed to dyes within the uniforms, formaldehyde, as well as various heavy metals (ALS Environmental J 1904629, J 1905056 and J 1905053 and Enthalpy Analytical 07/03/2019, 1 Report Number 311031. Formaldehyde was shown to be

released at markedly elevated levels above recommended standards of < 75 ppm by (Analysis Tex Test) Report 8999 when garments were exposed to heat and evaluated over time.

3. Is anatomic distribution of the dermatitis consistent with cutaneous exposure in relationship to the job tasks? Yes; the plaintiffs had skin rashes in areas of contact with their uniforms

4. Is there temporal relationship between exposure and onset consistent with dermatitis? Yes; the rashes began within weeks of introduction of the new uniform.

5. Are non- occupational exposures excluded as probable causes? Yes; The fact that so many employees wearing the new uniform developed skin rashes in areas of contact with this new uniform, points to this particular occupational exposure as being causative.

6: Does the dermatitis improve away from work exposure to suspected irritant or allergen? Yes; many of the plaintiffs' rashes resolved with discontinuing the new Delta uniform and with resumption of wearing a previous uniform.

7. Do patch or provocation test identify probable causal allergen? Yes; many of the plaintiffs had strong or extreme reactions to various Delta uniform items.

Note: In order to fulfill the criteria occupationally induced skin disease, one is not required to have a positive patch test. One requires 4/7 above criteria to be fulfilled.

The Intertox report, page 8, states that health complaints were filed from approximately 2.6% of all Delta Above Wing employees. Estimates from surveillance studies in the United Kingdom suggest that the incidence of occupational contact dermatitis is 13 to 34 cases per 100,000 workers (= .013%- .034%) (Ref 2,3 Meyer et al; Turner). While not all the Delta plaintiffs' health complaints were skin related, if we postulate that at least half the medical complaints were skin related (per summary sent to me), the figure of 1.3% (half of 2.6% total from Intertox report) of potential skin complaints from the Delta employees is 38-100 times published surveillance data on occupational contact dermatitis.

It is my professional opinion, to a reasonable degree of medical probability, that the respiratory symptoms or injuries including cough, breathing difficulty, chest tightness, and asthma, complained of by the Delta flight attendants were proximately caused by off-gassing of allergens and irritants from within the uniform. From the Analysis of Tex Test formaldehyde studies discussed above, several very high readings were recorded. (PLS-0063). Formaldehyde is a known irritant and allergen. Strict standards of formaldehyde release from clothing would be at levels < 75 ppm. A number of the Tex Test formaldehyde results exceeded this level.

One plaintiff had decreased lung functions as measured by her allergist measuring various objective lung functions called FEV1 and FEF25-75. These functions decreased, respectively on 2 occasions when in close proximity to her uniform. Plaintiff CB (office visit May 2019) showed a -16% and -17% decrease in lung function upon exposure to her uniform. Another exposure consisting of her uniform sitting next to her on a chair for 2 hours, resulted in the plaintiff having -18 % and -22 % change in various lung functions; Another plaintiff (DT Feb 2019) did a baseline spirometry and then breathed her uniform from a plastic bag for 60 minutes; She had a subsequent 10% drop in her lung function per review of chart note from her allergist. [REDACTED] was diagnosed with having reactive airway disease, which only arose after she started wearing the uniform and when she went for a methacholine challenge. Three months after she stopped wearing the uniform, she no longer had a positive study and her breathing was normal. Many plaintiffs experienced wheezing, and difficulty breathing just being exposed to co-workers wearing the purple uniforms during flights, even if the plaintiffs were wearing a black and white uniform which they tolerated. Another plaintiff, [REDACTED] never had excessive coughing symptoms at his

job until he started wearing a new service uniform by Delta; His treating allergist wrote that it was “more likely than not chemical used on uniform causing his hyper reactive airways”. Also, plaintiffs [REDACTED] and [REDACTED] were diagnosed by their treating physicians with vocal cord dysfunction caused by exposure to their uniforms.

Thus, respiratory compromise was objectively seen by pulmonary function test decreases upon exposure to their Delta uniforms and pulmonary symptoms in proximate exposure to others wearing Delta Uniforms by many plaintiffs. Additionally, given the numerous, strong and extreme positive patch test results from the very uniforms Delta employees wore, makes a very strong case that the uniforms were causative in their skin symptoms. This opinion is based within a reasonable degree of applicable medical probability, based upon applied my medical training and experience in contact dermatitis and occupational dermatology.

13.

In my professional opinion, to a reasonable degree of medical probability, the ocular symptoms including eye irritation, and eye watering, complained of by the Delta flight attendants were more likely than not proximately caused by off gassing of allergens and irritants from within the uniform.

14.

In my professional opinion, to a reasonable degree of medical probability, that the numerous reported incidence of hair loss, medically referred to as alopecia, are related to the uniforms. Hair loss was reported by 23% of the plaintiffs. Alopecia has been associated with exposure to heavy metals such as mercury, arsenic and selenium (Ref 4).

Per analysis Enthalpy Analytical 07/03/2019, XX 1 Report Number 311031, many Delta items contained high amounts of heavy metals, including:

LADIES BLAZER: antimony, mercury, chromium; LADIES VEST: Antimony, chromium; LADIES PANTS: Antimony, chromium, mercury; LADIES DOUBLE BREASTED WARMING SWEATER: chromium; LADIES INFLIGHT SIGNATURE DRESS: Antimony, Chromium; LADIES MOCK TURTLE NECK & CARDIGAN SWEATER SET; chromium;

Given the high levels of mercury and other heavy metals present in the uniforms and the wearing of uniforms for hours, it is more likely than not, that heavy metals in these uniforms were systemically absorbed and caused alopecia.

15.

It is my professional opinion, to a reasonable degree of medical probability, that the sensitization described by many of the Delta flight attendants were proximately caused by dyes and/or formaldehyde resins within the uniforms.

Sensitization occurs when one becomes allergic (or sensitized) to an allergen. For allergic contact dermatitis (a T cell mediated immune response, known as delayed type hypersensitivity), there are 2 phases involved (Leonard and Guttman-Yassky, Ref 5). The first is the sensitization phase, and the second is the elicitation phase. In the sensitization phase, a critical dose per unit area of allergen is taken up by scavenger cells called epidermal Langerhans cells and dermal dendritic cells. These cells migrate to a local draining lymph node and present allergen to naïve (undifferentiated) T cells. T cells with specific receptors for that allergen then expand into a clone of T cells with receptors for that specific allergen and leave the lymph node. Other immune cells also leave the lymph node and go into circulation, as well as go back to the epidermis. The primed T cells that go back to the epidermis are called T resident memory cells. These primed T cells can also

go to other sites of the body. Upon subsequent exposure to a critical dose per unit area of the same allergen or allergen with very similar structure, resident memory T cells become activated and release various chemicals called cytokines; these chemicals cause the activation of various other immune cells with subsequent dilation of blood vessels, inflammation, and all the signs and skin symptoms of allergic contact dermatitis including redness, swelling, itching, and occasional blisters. There are many mediators of inflammation that get released during this immune response and they have may also have effects on mast cells which can cause hives and swelling. The mediators of inflammation can have effects on neurons, which can cause itch and sometimes pain. These inflammatory cells when activated in the lungs or GI tract can cause symptoms in these organs. If the immune system is presented the same or cross reacting allergens in other clothing items or products, it could be a way that people would continue to react, even if not exposed to the original allergen. Thus, the statement that if the allergen is removed the symptom will subside does not apply in all circumstances. Given the strong and extreme reactions to formaldehyde and textile dyes as well as other documented allergens on patch testing, these plaintiffs could have ongoing problems with multiple clothing and skin care product items.

Patch testing is the gold standard for determining whether a person has contact allergy to a given chemical. Once a person is sensitized (allergic) to a substance/chemical, each time they encounter that same chemical in a high enough dose per unit area, that person will react with contact dermatitis. Many of the plaintiffs have documented contact allergens to textile dyes and formaldehyde resins, found in the Delta uniforms. Many also showed allergy to multiple other chemicals including various fragrance chemicals, surfactants (sudsing agents), metals (chromium, copper, nickel), and even steroid

chemicals. When the skin barrier is not intact from severe dermatitis as many of the plaintiffs experienced, individuals can develop allergy to items used on the skin to treat the rash and/or within personal care products and textiles. Some allergens such as metals (nickel, chromium) and fragrance can even be found in foods. All the above explain the chronicity of symptoms in some of the plaintiffs. Chromium and copper were patch test positive in some of the plaintiffs and were found to be present in the Delta garments.

For all these plaintiffs, in theory, subsequent exposure to documented allergens within skin care products and their own personal clothing could cause dermatitis, if presented to their immune system in a high enough dose per unit area. In fact, some plaintiffs subsequent to becoming sensitized to their Delta uniforms, were unable to wear clothing which previously had not bothered them. Also, the textile dyes, disperse blue 106, disperse blue 124 and disperse orange 3, to which some plaintiffs reacted, are structurally similar to a dye chemical, P phenylenediamine (PPD). PPD was also strongly or extremely positive in a number of plaintiffs. This PPD chemical is structurally similar to certain epoxy resin hardeners. Epoxy resin can be used to make certain plastic or vinyl items/coatings which could be used in furniture and other home items. Epoxy resins are also structurally similar to some polyurethane chemicals which could be used in furniture and other home items. For some plaintiffs, even sitting on their own home furniture gave them symptoms. One plaintiff cannot sit on furniture in her own home which has Scotchgard. She sometimes breaks out in a rash while shopping. She has very limited clothing she can tolerate, as many cause her to have a rash. She had a biopsy performed on her scalp which was consistent with a contact eczematous reaction. She has profound hair loss. Additionally, she cannot be in close proximity to coworkers wearing the Delta uniform.

16.

These professional opinions are not only supported by the above described evidence but also the following peer reviewed medical literature:

- 1) Mathias CT. Contact dermatitis and workers' compensation: criteria for establishing causation and aggravation. *J Am Acad Dermatol* 1989; 20:842-8.
- 2) Meyer JD, Chen Y, Holt DL, Beck MH, Cherry NM. Occupational contact dermatitis in the UK: a surveillance report from EPIDERM and OPRA. *Occup Med*. 2000;50(4):265-273.
- 3) Turner S, Carder M, van Tongeren M, et al. The incidence of occupational skin disease as reported to The Health and Occupation Reporting (THOR) network between 2002 and 2005. *Br J Dermatol*. 2007;157(4):713-722.
- 4) Yu et al. Alopecia and associated toxic agents: A systematic review. *Skin appendage disorders* 2018; 245-260.
- 5) Leonard A and Guttman-Yassky, The Unique Molecular Signatures of Contact Dermatitis and Implications for Treatment. *Clin Rev Allergy Immunol*. 2019;56(1):1-8.

The foregoing is true and correct and is based upon the materials reviewed in this case, my personal knowledge, education, experience and training. All opinions in this report are to a reasonable degree of medical probability.

Respectfully submitted this 18 day of December, 2020.



Pamela L. Scheinman, M.D.